REMARKS

Claims 1-6, 8, 9, 11, 13-20, 25, 26, and 29 have been amended, and claims 7, 9, 10, 12, 14, 21, 23, 24, 27, 28, and 30 have been cancelled. Claims 1-6, 8, 11, 13, 14-20, 22, 25, 26, and 29 therefore remain pending in the application. Applicant respectfully traverses the Office's rejections and, in view of the foregoing amendments and the following remarks, respectfully requests that the Office issue a Notice of Allowance. The amendments are supported by the specification and do not introduce new matter. Support for "a server farm" can be found on page 2, lines 10-11 of the written description. Support for "application server module" can be found on page 10, lines 4-6 of the written description. Support for "wherein the second application server module is located on a tier and the first server module is located on the tier, the first module and the second module located on the same tier" can be found on page 2, line 22 of the written description.

EXPECTATION THAT ANY SUBSEQUENT ACTION MAINTAIN NON-FINALITY

For at least the reasons discussed above and below in regards to independent claim 18, Applicant respectfully submits that any subsequent Office Action (other than a Notice of Allowance) should remain Non-Final. *See* 37 CFR §1.113, MPEP §706.07(a).

DRAWING OBJECTIONS

The drawings stand objected to because the Office states that "Fig. 2, depicts 'repeater module 262' as the recipient of the availability information from

'message queue 254' via 'path 248', however the disclosure recites 'The initial server module A 202 also uses the repeater module 256 to transfer the availability information to the respective message queues (260, ...) of the other server modules (204, 206, ... 208) via the message queue 254 Fig. 2 represents this information transfer by paths 248.'" (Office Action, page 2). The drawings are amended as indicated above to address this informality noted in the Office Action.

The drawings further stand objected to because the Office states that "Fig. 3 depicts 'Merge Logic 264' sending the reply to 'Sync Module 250' and 'Server Module A 202' sending the inquiry to 'Server Module n 208'. The sources and destinations of the inquiries and replies are not consistent amongst the depicted modules." (Office Action, page 2). The drawings are amended as indicated above to address this informality noted in the Office action. Accordingly, Applicant requests withdrawal of the drawing objections.

During the aforementioned interview, applicant's representative understood the examiner to agree that these drawing amendments eliminated the grounds for the drawing objections.

SPECIFICATION OBJECTIONS

The specification stands objected to because of the following informalities: "There are many instances in the disclosure such as page 12, line 23 which recite '(236, ... 238)' where it should read '(236, 238, ...) ' as well as instances such as page 19, line 2 which recite '(230, 232, 234)' where it should read '(230, 232, ... ,234)'" (Office Action, page 3). The specification is amended as indicated above

to address this and other informalities. Accordingly, Applicant requests withdrawal of the specification objections.

In addition, the disclosure is objected to for additional informalities specify in the office action on page 3, paragraphs 3 and 4. These informalities have been corrected by amending the figures as indicated in the attached replacement sheets.

During the aforementioned interview, applicant's representative understood the examiner to agree that these amendments to the specification eliminated the grounds for the disclosure objections.

§ 112 PARAGRAPH 2 REJECTIONS

Claims 7, 8, 11, 15, 17, 21, 22, 28, 30 stand rejected under 35 U.S.C. § 112 second paragraph, as allegedly being indefinite. Specifically, claims 7, 15, 17, 21, 28, and 30 stand rejected due insufficient antecedent basis for the limitation "a computer readable medium", claims 8 and 22 stand rejected for reciting the limitation "first status" without sufficient antecedent basis, claim 8 stands rejected for reciting the limitation "second status" without sufficient antecedent basis, and claim 11 stands rejected because the limitation "some time" is allegedly indefinite. For the sole purpose of expediting allowance, and without commenting on or conceding the propriety of the Office's rejections, Applicant has amended these claims as indicated below.

Applicant has cancelled claims 7, 21, 28, and 30, and amended claims 15 and 17 to recite "a computer-readable memory device", which is supported in the written description on page 6, lines 17-18.

Applicant has amended claims 8 and 22 to recite "a first status information", and amended claim 11 to recite "the first status information", providing sufficient antecedent basis for these limitations.

Applicant has also amended claims 8 and 22 to recite "a second status information", and amended claims 9 and 23 to recite "the second status information", providing sufficient antecedent basis for these limitations.

Finally, Applicant has amended claim 11 to recite "after being inactive ~~after having remained inactive for some time~~" as suggested by the Office to more clearly define the limitation.

During the afore-mentioned interview, the Office agreed that these amendments obviate grounds of the 35 U.S.C. § 112 second paragraph rejections of claims 7, 8, 11, 15, 17, 21, 22, 28, 30. Applicant thanks the Office for this indication.

§ 101 REJECTIONS

Claims 1-6, 18-20, 22-27, and 29 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. For the sole purpose of expediting allowance, and without commenting on or conceding the propriety of the Office's rejections, Applicant has amended these claims to recite "One or more computer-readable memory devices comprising computer-executable instructions that, when executed …". During the afore-mentioned interview, the Office agreed that these amendments obviate grounds of the 35 U.S.C. § 101 rejections. Applicant thanks the Office for this indication.

§§ 102 AND 103 REJECTIONS

Claims 1-7, 16-18, 20, 21, 29, and 30 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7, 069,317 (Colrain et al.).

Claims 8-15, 19, 22-28 stand rejected under 35 U.S.C. § 103(a) as being obvious over Colrain in view of U.S. Patent No. 6,163,855 (Shirvastava).

Applicant respectfully traverses the rejections. Nevertheless, Applicant has amended the independent claims in the manner discussed during the interview for the sole purpose of expediting allowance and without conceding the propriety of the Office's rejections.

THE CLAIMS

Claim 1 recites One or more computer-readable memory devices comprising computer-executable instructions that, when executed, synchronizes a system including a server farm comprising plural application server modules, the synchronizing comprising (added language underlined):

- receiving notification information at a first application server module of the server farm regarding a change in the system;
- acting on the notification information in the first application server module; and
- propagating the notification information from the first application server module to at least a second application server module, wherein both the first application server module and the second application server module are located on a same tier,
- wherein the notification information comprises an indication of whether or not at least one application used by the system is available to service user requests.

In making out a rejection of this claim before its amendment, the Office alleges that *Colrain* anticipates. Applicant respectfully disagrees. Nevertheless,

for the sole purpose of expediting allowance and without conceding the propriety of the Office's rejections, Applicant has amended this claim.

Applicant respectfully submits that Colrain is directed to a database monitor that notifies an application server when the database has failed, eliminating a potentially lengthy time-out. Colrain, Column 11, lines 30-43, see also Fig. 11. Colrain appears to be motivated to enable a clustered database system to quickly recover when an individual database fails by directing subsequent database requests to a different database: "Upon receiving notification, application server 1112 can … *connect to a different database*" (Colrain, Column 11 line 63 – Column 12 line 2, emphasis added).

Applicant respectfully submits that the Colrain at least fail to disclose or suggest:

> propagating the notification information from the first *application server* module to at least a second *application server* module, wherein the second application server module is located on a tier and the first server module is located on the tier, *the first module and the second module located on the same tier*
>
> Claim 1 (emphasis added).

Colrain does not discuss propagating a failure notification between application servers, because all communication occurs between database servers and applications servers. For support, Applicant directs the Office's attention to Fig. 1, which clearly shows server 11a, server 11b, server 11c, and server 11d each connected to cluster DB 12, but not connected to each other. Also see figures 10-13, which clearly indicate that communication only exists between database instances and application servers.

Furthermore, Colrain does not discuss "propagating the notification information from the first application server module to at least a second application server module, …, the first module and the second module located on the same tier." as recited in independent claim one, because communication between the application server 1112 and the components of computer system 1102 are communications between different tears. Specifically, application server 1112 is contained by an application tier, while cluster 1201 is contained by a data tier.

For at least these reasons, claim 1 is allowable.

Claims 2-6 depend from claim 1 and, as such, the remarks made above in regards to claim 1 apply equally to claims 2-6. Claims 2-6 are also allowable for their own recited features, which the references of record have not been shown to disclose, teach, or suggest. Applicant therefore submits that each of claims 2-6 is allowable at least for its dependency upon claim 1.

Claim 8 recites a method for synchronizing a system including plural application server modules, comprising (added language underlined):

- Forwarding a first status information reflecting whether or not at least one application used by the system is available to service user requests on in a first application server module to a second application server module, wherein both the first application server module and the second application server module are located on a same tier;
- merging the first status information with a second status information to produce merged information, a non-duplicative union of the first status information and the second status information, wherein the second status information reflects whether or not at least one application used by the system is available to service user requests on the second application server module;
- sending the merged information from the second application server module to the first application server module;

- acting on the merged information at the first application server module; and
- repeating the forwarding, merging, sending and acting for at least one other application server module.

In making out a rejection of this claim, the Office alleges *Colrain* in view of *Shirvastava* renders this claim obvious. Applicant respectfully disagrees. Nevertheless, for the sole purpose of expediting allowance and without conceding the propriety of the Office's rejections, Applicant has amended this claim to at least include the elements of dependent claims 8, 9, 12, and 14.

Shirvastava appears to be directed towards propagating updates to nodes in a cluster, such that all updates are applied to a node, or else the node will be removed from the cluster. Shirvastava, summary of the invention

Applicant respectfully submits that the Colrain in view of Shirvastava at least fail to teach or suggest:

> merging the first *status information* with a second *status information* to produce merged information, a non-duplicative union of the first status information and the second status information, wherein the second status information reflects whether or not at least one application used by the system is available to service user requests on the second application server module
>
> Claim 8 (emphasis added).

The Office cites column 11, lines 24-26: "Upon receiving the notification, process 1008 can then take appropriate actions based on the failure of process 1006." as Applicant's "acting on the merged information at the first server module". Applicant disagrees, and submits that Colrain cannot discuss acting on the merged information, because Colrain does not contemplate merging information in the first place. Applicant respectfully submits that the Office

admits Colrain does not teach merging the first status information with the second status information (Office Action page 12).

Furthermore, Applicant respectfully submits that Colrain in view of Shirvastava does not teach or suggest "merging the first *status information* with a second *status information* to produce merged information, a non-duplicative union of the first status information and the second status information" as recited in claim 8. The Office cites "These updates are handled as a single transaction by combining them into a *single global update message*, whereby via GLUP, all of these sub-operations are committed together on every node in the cluster else none of the sub-operations are committed." (Shirvastava, col. 7 lines 13-25). However, Applicant respectfully submits that the single global update message cannot be "merged information", because "merged information" includes status information reflecting a state in a first server module and status information reflecting a state of the second server module. Applicant respectfully submits that Shirvastava appears to discuss merged update commands, not merged state information.

For at least this reason, claim 8 is allowable.

Claims 11, 13, and 15 depend from claim 8 and, are allowable by virtue of this dependency. Claims 11, 13, and 15 are also allowable for their own recited features, which the references of record have not been shown to disclose, teach, or suggest. Applicant therefore submits that each of claims 11, 13, and 15 is allowable at least for its dependency upon claim 8.

Claim 16 recites a method of advising a user of the availability of an application in a system including plural application server modules, comprising (added language underlined):

- receiving, at an application server module in the system, a user's request for an application;
- consulting an application store associated with the application to determine whether the application is unavailable, and, if so generating a response; and
- forwarding the response to the user in response to the received request, wherein the user to whom the response is forwarded is the user who requested the application, and wherein each of the plural server modules in the system maintains its own respective application store.

In making out a rejection of this claim before its amendment, the Office alleges that *Colrain* anticipates. Applicant respectfully disagrees. Nevertheless, for the sole purpose of expediting allowance and without conceding the propriety of the Office's rejections, Applicant has amended this claim.

Applicant respectfully submits that the Colrain at least fail to disclose or suggest:

> forwarding the response to the user in response to the received request, wherein the user to whom the response is forwarded is the user who requested the application, and wherein each of the plural server modules in the system maintains its own respective application store
>
> Claim 16 (emphasis added).

The Office asserts "Notifications are also provided as part of planned operations on the cooperative resource group 32 using a flexible user interface (not shown) *implemented in an applications and middleware layer*" as applicant's "forwarding the response to the user …". Applicant respectfully submits that the user interface discussed in Colrain used by IT administrators, not the user who generated the request. See Fig. 5, and Column 8 line 66 – Column 9 line 3: "which allows user defined control over failover, switchover, and related

operations, such as creating a record of uptime and opening fault-tracking tickets". Claim 16, on the other hand, recites "forwarding the response to **the** user in response to the received request, wherein the user to whom the response is forwarded is the user who requested the application" (emphasis added). Colrain does not disclose or suggest forwarding the response to the user that submitted the request for an application, as recited in claim 16.

For at least this reason, claim 16 is allowable.

Claim 17 depends from claim 16 and, as such, the remarks made above in regards to claim 16 apply equally to claim 17. Claim 17 is also allowable for its own recited features, which the references of record have not been shown to disclose, teach, or suggest. Applicant therefore submits that claim 17 is allowable at least for its dependency upon claim 16.

Claim 18 recites <u>one or more computer readable memory devices comprising computer executable instructions that, when executed, implements a</u> synchronization module on a first server module in a system including plural server modules, <u>the synchronization module</u> comprising (added language underlined):

- <u>a</u> repeater logic configured to:
  - receive notification information pertaining to a change in the system;
  - upload the notification information into at least one application store associated with at least one respective application; and
  - propagate the notification information from the first server module to at least a second server module,
- wherein the notification information uploaded to said at least one application store comprises an indication of whether or not said at least one application is available to service user requests.

In making out a rejection of this claim, the Office alleges that *Colrain* anticipates. Applicant respectfully disagrees, and submits that Colarin at least fails to disclose or suggest "*upload the notification information* into at least one *application store* associated with at least one respective application" as recited in claim 1 (emphasis added). For this element, the Office cites column 11, lines 24-26: "Upon receiving the notification, process 1008 can then take appropriate actions based on the failure of process 1006." however, Applicant respectfully submits that no application store is discussed, and the only example of "appropriate action" is altering the database that the receiving application uses to process subsequent requests.

For at least these reasons, claim 18 is allowable.

Claims 19 and 20 depend from claim 18 and, as such, the remarks made above in regards to claim 18 apply equally to claims 19 and 20. Claims 19 and 20 are also allowable for their own recited features, which the references of record have not been shown to disclose, teach, or suggest. Applicant therefore submits that each of claims 19 and 20 is allowable at least for its dependency upon claim 18.

Claim 22 recites <u>one or more computer readable memory devices comprising computer executable instructions that, when executed, synchronize</u> a system including plural server modules, <u>the synchronizing</u> comprising (added language underlined):

- merge logic configured to:
    - forward <u>a</u> first status information reflecting a state in a first server module to a second server module; and

- receive merged information from a second server module, wherein the merged information reflects a merging of the first status information with a second status information, the second status information reflecting a state of the second server module, wherein the first and the second status information includes notification information regarding a change in the system, the notification information comprising an indication of whether or not at least one application used by the system is available to service user requests; and

- a repeater module configured to act on the merged information, wherein the merge logic is configured to repeat the forwarding and receiving for a third server module, wherein when a request by a user to access an application is received by the third server, the third server:
  - checks the forwarded status information; and
  - when the forwarded status information indicates the application is unavailable, immediately responds to the user who requested to use the application with a response indicating that the application is unavailable

In making out a rejection of this claim, the Office alleges *Colrain* in view of *Shirvastava* renders this claim obvious. Applicant respectfully disagrees. Nevertheless, for the sole purpose of expediting allowance and without conceding the propriety of the Office's rejections, Applicant has amended this claim.

Applicant respectfully submits that the Colrain in view of Shirvastava at least fail to teach or suggest:

> wherein when a request by a user to access an application is received by the third server, the third server:
>
> checks the forwarded status information; and
>
> when the forwarded status information indicates the application is unavailable, immediately responds to the user who requested to use the application with a response indicating that the application is unavailable

Claim 22.

For at least these reasons, claim 22 is allowable.

Claims 25 and 26 depend from claim 22 and, as such, the remarks made above in regards to claim 22 apply equally to claims 25 and 26. Claims 25 and 26 are also allowable for their own recited features, which the references of record have not been shown to disclose, teach, or suggest. Applicant therefore submits that each of claims 25 and 26 is allowable at least for its dependency upon claim 22.

Claim 29 recites one or more computer readable memory devices comprising computer executable instructions that, when executed, advise ~~A server module for advising~~ a user of the availability of an application in a system including plural server modules, the advising comprising (added language underlined):

- an application store associated with the application;
- logic configured to receive, at a first server module in the system, a user's request for an application;
- logic configured to consult the application store to determine whether the application is unavailable, and, if so, to generate a response; and
- logic configured to forward the response to the user,
- wherein each of the plural server modules in the system maintains its own respective application store.

In making out a rejection of this claim before its amendment, the Office alleges that *Colrain* anticipates. Applicant respectfully disagrees, and submits that Colrain does not disclose or suggest:

> logic configured to receive, at a first server module in the system, *a user's* request for an application;
> logic configured to consult the application store to determine whether the application is unavailable, and, if so, to generate a response; and
> logic configured to forward the response to *the user*

Claim 29 (emphasis added).

Applicant respectfully submits, as was discussed above, that while Colrain discusses displaying a response to a user, the user to whom the response is displayed is not the user who requested the application.

For at least this reason, claim 29 is allowable.

CONCLUSION

For at least the foregoing reasons, claims 1-6, 8, 11, 13, 14-20, 22, 25, 26, and 29 are in condition for allowance. Applicant respectfully requests reconsideration and withdrawal of the rejections and an early notice of allowance. If any issue remains unresolved that would prevent allowance of this case, Applicant respectfully requests the Office to contact the undersigned representative to resolve the issue.

Lee & Hayes, PLLC
Representatives for Applicant

/David W. Foster/ Dated:5/7/2008

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